

REMARKS

Claims 1, 4-8, 12, 13, 15, 16, 18, 19 and 21-25 are pending in the Application. Claim 1 is an independent claim and claims 4-8, 12, 13, 15, and 24 depend there from. Claim 16 is an independent claim and claims 18-19, 21-23, and 25 depend there from. Applicant respectfully requests continued examination and reconsideration of the application in light of the following remarks.

Claims 1-2, 5-8, 12-13, 15-19 and 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jiang et al. (U.S. Patent No. 6,901,362, hereinafter “Jiang”) in view of Boland (U.S. Patent No. 7,171,357) and further in view of Su et al. (U.S. Patent No. 7,127,390, hereinafter “Su”).

With regard to an obviousness rejection, MPEP 2142 states that in order for a prima facie case of obviousness to be established, three basic criteria must be met, one of which is that the reference or combination of references must teach or suggest all the claim limitations. Further, MPEP 2143.01 states that “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination”, and that “although a prior art device ‘may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so’” (citing *In re Mills*, 916 F. 2d 680, 16 USPQ 2d 1430 (Fed Cir. 1990)). Moreover, MPEP 2143.01 also states that the level of ordinary skill in the art cannot be relied upon to provide the suggestion...,” citing *Al-Site Corp. v. VSI Int’l Inc.*, 174 F. 3d 1308, 50 USPQ 2d. 1161 (Fed Cir. 1999).

Claim 1 is amended to recite “A method for classifying an audio signal, the method comprising:

- receiving an audio signal to be classified;
- dividing the audio signal at least into sub-bands compatible with speech and incompatible with speech;
- calculating a ratio of the sub-bands;

comparing the ratio to a threshold value; and
classifying the audio signal based upon the comparison as either speech or music;
transforming the audio signal into frequency domain;
allocating a number of bits for each of a plurality of frequency components
resulting from transforming the audio signal into the frequency domain based on the
classification of either speech or music;
quantizing each of the frequency component resulting from transforming the
audio signal into the frequency domain with the allocated number of bits based on the
classification of either speech or music.

Applicant respectfully submits that after review, none of the references, Jiang, Boland, or Su teach “allocating a number of bits for a plurality of frequency components resulting from transforming the audio signal into the frequency domain *based on the classification of either speech or music*” or “quantizing the frequency component resulting from transforming the audio signal into the frequency domain with the allocated number of bits *based on the classification of either speech or music*”.

Regarding claim 16, Applicant respectfully submits that the proposed combination of references fails to teach, suggest, or disclose at least, for example, “a quantizer for allocating a number of bits for each of a plurality of frequency components resulting from transforming the audio signal into the frequency domain *based on the classification of either speech or music* and quantizing each of the frequency components resulting from transforming the audio signal into the frequency domain with the allocated number of bits *based on the classification of either speech or music*” as set forth in Applicant’s independent claim 16.

The Applicant respectfully submits that, based upon the above, the proposed combination of Jiang, Boland and Su fails to teach or suggest by themselves or in combination all of the limitations of Applicant’s independent claims 1 and 16, and that the

rejections of claim 1 and 16 under 35 U.S.C. §103(a) cannot be maintained. Therefore, Applicant respectfully requests that the rejections of claim 1 and 16 under 35 U.S.C. §103(a), be withdrawn.

Additionally, dependent claims 24 and 25 are added reciting

24. The method of claim 1, wherein allocating comprises:

allocating a higher number of bits to quantize higher frequency components if the audio signal is classified as music than a number of bits allocated to quantize the higher frequency components if the audio signal is classified as speech; and allocating a higher number of bits to quantize lower frequency components if the audio signal is classified as speech than a number of bits allocated to quantize the low frequency components if the audio signal is classified as music.

25. The system of claim 16, wherein allocating comprises:

allocating a higher number of bits to quantize higher frequency components if the audio signal is classified as music than a number of bits allocated to quantize the higher frequency components if the audio signal is classified as speech; and allocating a higher number of bits to quantize lower frequency components if the audio signal is classified as speech than a number of bits allocated to quantize the low frequency components if the audio signal is classified as music.

Assignee respectfully submits that after reviewing them, none of Jiang, Borland, or Su teach, “allocating a higher number of bits to quantize higher frequency components if the audio signal is classified as music than a number of bits allocated to quantize the higher frequency components if the audio signal is classified as speech; and allocating a higher number of bits to quantize lower frequency components if the audio signal is classified as speech than a number of bits allocated to quantize the low frequency components if the audio signal is classified as music”. Accordingly, allowance is respectfully requested for claims 24 and 25.

Because each of the remaining claims depend, directly or indirectly, from independent claim 1 or 16, and because claims 1 and 16 are allowable over the proposed combination of references, the Applicant asserts that rejections of dependent claims are now moot and these claims are now allowable.

The Office Action makes various statements regarding the claims, 35 U.S.C. § 103(a), the Jiang reference, the Boland reference, the Su reference, the Yamada reference, the Manjunath reference, one of skill in the art, etc. that are now moot in view of the above amendments and/or arguments. Thus, the Applicants will not address all of such statements at the present time. However, the Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

CONCLUSION

Applicant respectfully submits that each of the pending claims are in condition for allowance, and requests that the application be passed to issue. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below. Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

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Respectfully submitted,

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